Teenage pregnancy and social disadvantage: systematic review integrating controlled trials and qualitative studies

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CRD summary
This review concluded that the effectiveness of early childhood interventions and youth development programmes for reducing unintended teenage pregnancy was supported by a small, but sound, evidence base. This was a generally well conducted piece of research, but given the limitations with the reliability and generalisability of the included studies, the authors' conclusions should be interpreted with caution.

Authors' objectives
To determine the impact on teenage pregnancy of interventions that address the social disadvantage associated with early parenthood and to assess the suitability of such interventions for young people in the United Kingdom.

Searching
PubMed including MEDLINE, EMBASE, CINAHL, ERIC, SocAbstracts, ASSIA, and PsycINFO were searched between 1950 and June 2004 without language restrictions. BiblioMap, Cochrane Central Register of Controlled Trials (CENTRAL), NRR, Health Promotion Library for Scotland (HPLS) and Health Promis were also searched. The search terms were not reported. Four appropriate journals and the reference lists of relevant articles were manually searched, and experts consulted, to identify additional articles.

Study selection
Randomised and non-randomised controlled trials were eligible for inclusion if they reported teenage conceptions or births following interventions to target social disadvantage, as an outcome measure. Eligible interventions were targeted at children, young people, or their families to improve life opportunities and finances, including educational or income support. Controlled trials of sex education or sexual health services and qualitative studies focusing on attitudes to, and knowledge of, sexual health or sex education were excluded. Qualitative studies were included as part of the review, but they did not contribute to the effectiveness of the interventions.

Included studies involved youth development programmes and early childhood interventions, and the providers in most of the studies were teachers. The majority of studies compared the intervention with no intervention or standard education, and were undertaken in school, community, and home settings, in the USA. They comprised young people aged from 0 to 17 years, the percentage of females ranged from 40% to 85%, and, where stated, the proportion of white participants ranged from 0% to 44%; in most studies this was less than 19%. Study duration ranged from one to eight years.

Pairs of reviewers independently selected studies for inclusion in the review.

Assessment of study quality
Two reviewers independently assessed the methodological quality of studies using the following criteria: data were reported for each outcome measure; a control or comparison group was equivalent to the intervention group; pre-intervention data were provided for all participants; and post-intervention data were provided for all participants. Studies that reported details for all criteria were considered to be methodologically sound.

Data extraction
Pregnancy and birth rates were extracted as relative risk (RR) data. Additional or missing data were obtained by contacting the study authors where necessary.

Pairs of reviewers independently extracted data for the review.
Methods of synthesis
Data were combined in a random-effects meta-analysis to calculate a pooled RR with its 95% confidence interval (CI). The effects of interventions on pregnancy rates were reported separately for men and women and they were assessed separately by intervention type; youth development programme or early childhood intervention. Statistical heterogeneity was assessed using a $\chi^2$ test.

Results of the review
Ten controlled trials were included in the review, six of which were of sufficient methodological quality (2,822 patients, range 104 to 1,163), and four of these were included in the meta-analyses.

Compared with individuals receiving standard practice or no intervention, teenage pregnancy rates amongst young women receiving an intervention were 39% lower (RR 0.61, 95% CI 0.48 to 0.77; four controlled trials). There were no significant difference in the number of partner pregnancies reported by young men who had received an intervention compared with those who had not (RR 0.59, 95% CI 0.34 to 1.02; three controlled trials). The effects of interventions on birth rates were reported in the review (one trial for each intervention type). There was no evidence of statistical heterogeneity.

The main themes from the qualitative studies were reported in the review.

Authors' conclusions
A small but reliable evidence base supports the effectiveness and suitability of early childhood interventions and youth development programmes for reducing unintended teenage pregnancy.

CRD commentary
The review question and inclusion criteria were clear for participants, intervention, outcomes, and study design. A thorough search of the literature was undertaken without language restrictions, reducing the potential for language bias. It was unclear whether unpublished studies were sought; some studies may have been missed. Search terms were not reported. Procedures to minimise reviewer bias and error were reported for all stages of the review process. The validity assessment used appropriate criteria and was used to inform the synthesis. The meta-analysis appeared to be appropriate based on the characteristics of the trials. Reasonable steps were taken to assess the statistical heterogeneity and there was no evidence of this. The small number of controlled trials were all undertaken in the USA and the authors acknowledged that this could affect the generalisability of the findings to a UK setting.

This was a generally well-conducted review, but given the small number of trials for each meta-analysis and that most of the individual trials had wide confidence intervals that crossed one (meaning that the pooled data might not be robust), the authors’ conclusions should be interpreted with caution.

Implications of the review for practice and research
Practice: The authors stated that investment in youth programmes should complement, rather than replace, high-quality sex education and contraceptive services.

Research: The authors recommended future qualitative research, but not quantitative research.

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Bibliographic details

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.